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Altitudinal changes in malaria incidence in highlands of Ethiopia and Colombia

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Abstract:

The impact of global warming on insect-borne diseases and on highland malaria in particular remains controversial. Temperature is known to influence transmission intensity through its effects on the population growth of the mosquito vector and on pathogen development within the vector. Spatiotemporal data at a regional scale in highlands of Colombia and Ethiopia supplied an opportunity to examine how the spatial distribution of the disease changes with the interannual variability of temperature. We provide evidence for an increase in the altitude of malaria distribution in warmer years, which implies that climate change will, without mitigation, result in an increase of the malaria burden in the densely populated highlands of Africa and South America.

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Resource Description

Exposure: M

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature: M

resource focuses on specific type of geography

Other Geographical Feature

Other Geographical Feature : highland

Geographic Location: M

resource focuses on specific location

Non-United States

Non-United States: Africa, Central/South America

African Region/Country: African Country

Other African Country: Ethiopia

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Health Impact: M

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Resource Type: **☑**

format or standard characteristic of resource

Research Article

Timescale: M

time period studied

Time Scale Unspecified